



Ice Age Forest Discovered in Sanctuary Waters

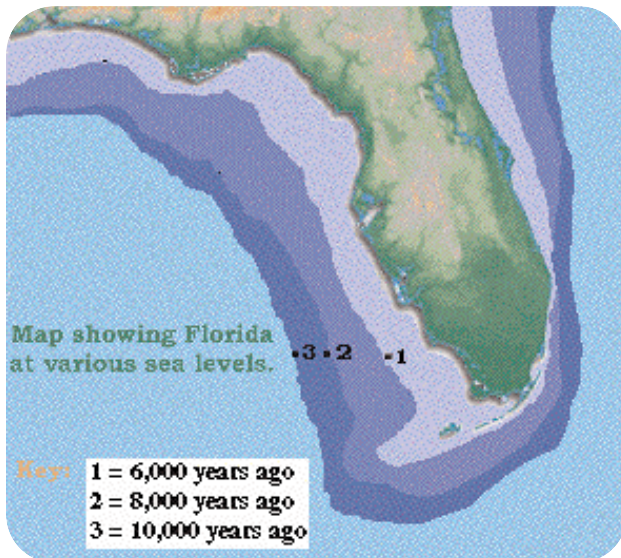
Nancy Diersing, Sanctuary Education Specialist

“Our immediate thought was that it was dunnage or firewood from a ship, and this generated excitement among the team members. Further excavation, though, just left everyone feeling perplexed,” commented Corey Malcom, Director of Archaeology for the Mel Fisher Maritime Heritage Society (MFMHS), in reference to the piece of aromatic pine that was brought to the surface last summer by George Robb, founder of RPM Nautical Foundation and supporter of the MFMHS.

The archaeological team came across the pieces of wood during their pursuit of artifacts from the slave ship, *Henrietta Marie*, which sank off Key West in 1700. They received a permit from the Sanctuary to excavate the small sandy area in 45 feet of water after detecting magnetic anomalies at that location during an earlier survey conducted from the surface. The team had hoped to find cannons from the *Henrietta Marie* at the New Ground site, but instead came across an unusual layer of marly sediment containing bits and pieces of organic material, tree branches, a pine cone, small snail shells, and oysters. The snail shells and oysters, which were attached to wood in some cases, did not appear to be modern marine creatures. “Suspensions arose that this might be something completely unrelated to the *Henrietta Marie* and represented a time well before the colonial period,” recalled Malcom.



Archaeologist Corey Malcom measures wood at the New Ground site. (Photo: Dylan Kibler)



The shoreline of Florida has fluctuated, depending upon sea levels. Prehistoric Florida was much larger than today. (Coastline map: State of Florida Division of Historical Resources)

In fact, radiocarbon analysis of samples from the site confirmed them to be yellow pine and red mangrove wood about 8,400 years old. Unexpectedly, the archaeologists had uncovered a portion of earth that was exposed during the Pleistocene Ice Age when sea levels were lower and the Florida peninsula was much larger than today (see map). At this time, Florida’s drier, cooler climate supported extensive pine and oak forests and local prairies, depending upon the elevation of the land and its proximity to water. As the earth began to experience a warming period about 12,000 years ago, the polar ice caps started to melt, causing the sea level to rise. By 2,000 years ago, much of what had been dry land was submerged and buried under sediments over time.

Some of the wood fragments obtained from the New Ground site showed evidence of being burned, indicating that the area had experienced fire, a common occurrence in today’s modern pine forests. The black rocks that were recovered from the site were identified by Sanctuary scientist Harold Hudson as limestone that had been burned. This finding was later confirmed by Dr. Eugene Shinn, United States Geological Survey Scientist, who has published extensively on the geology of South Florida.

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Although no evidence of human habitation has been found at the site, the possibility of finding Paleo-Indian artifacts or skeletal remains still exists. Paleo-Indians are known to have inhabited the Florida Peninsula beginning about 12,000 years ago, about the time the sea level began to rise. These early Floridians were hunters and gatherers who used the diverse food sources available. Evidence from the 9,600 year-old Cutler Fossil Site in Dade County shows that they adapted to hunting smaller game after the mammoths, dire wolves, shortfaced bears, and other large animals of Florida became extinct 11,000 years ago.



Burnt limestone rocks were recovered from the New Ground site. (Photo: Corey Malcom)

According to Dr. Robert S. Carr, Archaeologist for the Cutler Fossil Site and many others, "Evidence of Paleo-Indian (15,000-8,000 BC) and Archaic Period (8,000 to 2,000 BC) sites in the Florida Keys is thus far lacking. Undoubtedly, it will be underwater archaeologists who will make the initial discovery of these early sites, since rising sea levels have covered most of the land mass that was part of the present-day Keys." Malcom and his team from the Mel Fisher Maritime Heritage Society plan to continue their investigations at New Ground. "The hope is that interested scientists from the Sanctuary and elsewhere will join forces with us in the study of this small plot of prehistoric Florida."

Archaeology, Paleontology, and Geology Web Resources

For more information, visit:

Mel Fisher Maritime Heritage Society <http://www.melfisher.org/>

Florida Bureau of Archaeological Research <http://dhr.dos.state.fl.us/bar/>

Florida Division of Historical Resources <http://dhr.dos.state.fl.us/>

Prehistoric Timeline of Native Peoples <http://www.co.pinellas.fl.us/BCC/yatki/prehistoric.htm>

The PaleoIndian Period http://dhr.dos.state.fl.us/bar/hist_contexts/paleo.html#setting

Climate Change Caused Extinction of Big Ice Age Mammals

http://news.nationalgeographic.com/news/2001/11/1112_overkill.html

Florida Fossils <http://www.dep.state.fl.us/geology/geologictopics/fossil.htm>

Florida Museum of Natural History <http://www.flmnh.ufl.edu/>

*Note: This article appeared in the Winter 2002 issue of the newsletter of the Florida Keys National Marine Sanctuary, **Sounding Line**. For more information, visit: floridakeys.noaa.gov.*